Staff Document

COMPETITION IN PRIVATE CANADIAN TELEVISION BROADCASTING

Part 2: The Impact of Future Alternative Services and Distribution Technologies

Future Regulatory Environment Project

(CRTC Research, March 1984)

Research Analysis Group
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Preface

Part 1 of Competition in Canadian Broadcasting traced the impact of cable delivery of U.S. stations, and the licensing of new Canadian services, on private broadcasting in Canada during the 1972-1982 period. This paper examines the extent to which existing private broadcasters will be affected by the new and the services that they will distribute.

Competition in Canadian Broadcasting, Parts 1 and 2, forms one of four sector studies in CRTC Research's Future Regulatory Environment Project.

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EXECUTIVE SUMMARY

I. Introduction

(i) Present Status of the Private Television Broadcasting Industry

Historical data indicates that the private television broadcasting industry is well-positioned to deal with the new competitive environment. The industry has experienced a sustained average annual growth in excess of 16%, representing an outstanding sectoral performance. Conventional broadcasters have already absorbed the greatest impacts of competition during the period of 1972-1982, during which the importation of distant Canadian and U.S. signals via cable and the licensing of new Canadian stations severely fragmented broadcasters' audiences, without adversely affecting their financial performance.

Conventional broadcasters will be able to use their financial strength and stability to their advantage as new services are introduced. For example, broadcasters will have the flexibility to adjust their programming and marketing strategies to cope with new competition or they may be able to enter new markets themselves. In any event, private broadcasting will continue to be an efficient means by which viewers can access entertainment programming, and national advertisers can reach large audiences.

(ii) Viewing Trends

Research indicates that increases in the number of stations available does not necessarily translate into an increase in the amount of time viewers spend watching television. In addition, viewers do not use all the channels and services available to them. Estimates of the impact of future services should take these viewing trends into account.

II. Overview of Technologies

This section provides a description and analaysis of the range of alternative distribution technologies in terms of their impact on conventional services. It does not provide an exhaustive evaluation of future applications or their widespread impact; nor does it address in detail the specific services which may be offered through alternative technologies, as new services will be analysed in detail later in the paper.

(i) Cable

Cable had traditionally been perceived as a threat to local broadcasting, as it introduced competition in the forum of distant signals into local markets, thereby fragmenting audiences. Regulations designed to afford broadcasters some protection were applied to cable; specifically carriage priorities and simultaneous program substitition.

(ii) SMATV

The proliferation of SMATV system affect local broadcasters to the extent that local services may not be made available to SMATV viewers. In cases where they are still available, their competitive position may be reduced insofar as SMATV systems are not subject to regulations which favour local broadcasters.

The future of SMATV in Canada depends on a number of factors, including decisions regarding CRTC jurisdiction over the systems, and CRTC cable policy and its impact on the competitiveness of cable.

(iii) DBS

DBS can be used for delivery of programming directly to the individual viewer as well as to cable head-ends or other terrestrial distribution systems. As such, it represents an alternative distribution mechanism for both existing programming as well as new potential services.

Due to the coverage pattern of high power U.S. DBS satellites, true U.S. DBS services will spill over into most of the Canadian market, and therefore may encourage viewers to bypass the regulated Canadian system. As in the case of SMATV, the impact of U.S. DBS and its bypass potential, will depend on the Commission's cable policy, as well as various programming and marketing variables.

(iv) MDS

MDS could be used to retransmit signals from conventional television stations, U.S. stations, specialty services and pay TV. MDS is less expensive than cable to operate but it is more expensive to subscribers. It will likely be used in remote and underserved areas or small communities around urban centres to receive television services not otherwise available. As such, it could enhance local broadcaster's coverage or introduce competition in those markets with limited services available.

(v) LPTV

In the Canadian context, in cabled areas, potential program providers have the alternative of using a cable channel for local distribution rather than establishing an LPTV station. Indeed, the high penetration of cable will likely reduce the widespread expansion of LPTV as a distribution medium. It would likely be a more attractive alternative in underserved areas to allow the entry of new services.

(vi) STV

In Canada, STV is only found in underserved areas, in which low-power television stations distribute the CANCOM network signals on a subscription basis. Indeed the possibility of establishing full power STV systems in Canadian cabled areas is remote for, as the U.S. experience indicates, it is not likely that STV stations could survive the competition of cable. As such, it will have no significant impact on local private broadcasters.

(vii) VCR

The high penetration predicted for VCRs may be offset by the infrequent use of the technology, and thereby minimize its impact on conventional broadcasting. In addition, to the extent that VCR use focuses primarily on recording and playing conventional programming, it may not significantly affect viewing of conventional programming. However, the ability of VCR users to edit out commercials when taping a program may disrupt broadcasters' scheduling patterns or may reduce advertising revenues if the loss of audience is accurately measured.

(vii) Videodisc Players

Due to its inability to record, its price and its limited software, videodisc players are not likely to achieve significant market penetration. As such, the amount of viewing time lost by conventional broadcasters to the use of videodisc players will probably be insignificant.

(ix) Home Computers

Home computers will not likely be used as an alternative to conventional television watching. Therefore, they are not expected to affect the broadcasting industry.

III ALTERNATIVE SERVICES

This section presents a description of future services which could impact on the viewing of conventional television.

a) Programming Services

(i) Pay TV

Approximately 60% of pay tv use is in off-prime periods, such as late at night. As such, the impact of pay tv on conventional networks viewing shares and on revenues during prime time hours has been minimal. In any event, the loss of viewing share to private broadcasters, due to pay tv viewing, will not likely translate into financial harm for broadcasters since pay tv and conventional broadcasters do not compete for advertising sales. Furthermore, despite the high level of fragmentation which already exists in most broadcast markets, broadcasters' revenues have not been impacted.

(ii) Specialty Services

In the event that a number of specialty services are successfully established in Canada and are available either nationally or in large urban markets, it is likely that their impact on local broadcasters would be minimal. These services will be offered to a limited potential market on cable's converter service. They would be entering highly fragmented markets in which local broadcasters have already

absorbed the impact of fragmentation. Specialty services could, in fact, strengthen the viewing share of Canadian broadcasters as a whole in relation to U.S. broadcasters. Broadcasters may also provide an important second "window" for the syndication of specialty programming.

(iii) CANCOM Delivery of 3+1

In the event that CANCOM's U.S. package is more widely available, it may not have any greater impact on the revenues to Canadian broadcasters than the U.S. network signals that were imported into most Canadian markets via cable during the 1970s. That is, Canadian broadcasters have already experienced the audience fragmentation caused by the availability of popular U.S. services, with no undue effect on national advertising sales. Advertisers require the coverage achieved by the local broadcasters and continued to purchase the Canadian market, despite the extended reach of U.S. border stations.

(iv) Superstations

The availability of U.S. superstations in Canada will not likely affect the revenue base of private broadcasters, which still provide advertisers with large audiences through the scheduling of mass-appeal programming. The impact will be further minimized by the fact that prime-time viewing of U.S. superstations does not totally coincide with that of the conventional networks and to the extent that the superstations schedule different programming, their introduction would not affect the costs of popular programming purchased by private broadcasters.

In terms of Canadian superstations, if their program schedules are more directly competitive, they may adversely affect the viewing shares of local broadcasters and the costs of some foreign programming. However, importation of distant Canadian signals has not historically harmed the financial position of the local private television stations, since broadcasters increased advertising rates to compensate for the audience fragmentation. The introduction of Canadian superstations would also likely increase overall viewing share of Canadian stations, at the expense of the U.S. stations in the local market.

(v) Pay-Per-View

The primary impact of pay-per-view on local private broadcasters would be seen in the stations' shares in those time periods when special-event, high appeal programming is scheduled. However, these events are extremely limited relative to the total broadcast schedule. More importantly, no advertising is sold by pay-per-view operators. Therefore, the specialized pay-per-view programming would have a minimal overall impact on the conventional broadcasters' revenues.

b) Non-Programming Services

(i) Videogames

Videogames as entertainment are more similar to traditional "social" games than to conventional television watching. Videogame playing, therefore, is not expected to significantly reduce the amount of time spent watching television entertainment, particularly in view of increasing number of households with more than one television set. Hence, increased use of videogames should not significantly affect local broadcasters.

(ii) Teletext and Videotex

Since teletext and videotex are primarily information-oriented services and not entertainment media, they are not likely to take away from television viewing. They may, however, replace time otherwise allocated by viewers to print media, banking, shopping, etc. Consequently, teletext and videotex will not have any significant effect on local broadcasters in the future.

IV Conclusions

The following conclusions may be drawn from the discussion of alternative technologies and services:

(i) The future environment will be characterized by a variety of alternative distribution technologies, some of which will lie outside the control of the regulator. Some of these alternatives such as SMATV will pose a significant threat to the future of cable. As such, they will reduce the effectiveness of those cable regulations which are intended to protect local broadcasters i.e. carriage priorities, simultaneous program substitution.

(ii) Alternative technologies will make possible the entry of new service providers, regardless of the direction of regulatory policies. Indeed, regulatory policies should recognize the inevitability of such entry and adjust accordingly.

(iii) Specific technologies, such as DBS, may be utilized by existing broadcasters to achieve more effective and/or less costly means of network coverage.

(iv) Similarly, other distribution technologies, including MDS and LPTV, may improve local coverage.

(v) To the extent that SMATV and DBS systems may not distribute local Canadian services, this technology may adversely affect local coverage.

(vi) The availability of new services in local markets will fragment audiences to local broadcasters. This audience fragmentation will be minimized by the fact that viewers do not watch all the channels available to them.

(vii) To the extent that pay television, pay-per-view and specialty services will be of limited appeal and will not compete for advertising revenues, they will not have an adverse effect on the financial position of broadcasters. Indeed, these services may offer an additional source of programming for private television, as these service providers seek to syndicate their in-house programming to additional markets.

(viii) Despite competition from more widely-available, advertiser-supported formats, such as superstations, private broadcasters will continue to achieve the coverage needed by advertisers. Similarly, the delivery of the 3+1 U.S. services via CANCOM will not likely diminish Canadian broadcasters' ability to attract advertising revenues, as advertisers seek the widespread coverage of local stations. Indeed, Canadian broadcasters have already faced the competitive impact of the U.S. services in their markets.

(ix) Increased competition and accompanying audience fragmentation will not significantly affect broadcasters' financial position. Indeed, U.S. sources estimate that although erosion of network audiences may reduce the prime-time network viewing share to 65% by 1990,[1] it will not significantly reduce the attractiveness of network television for advertisers.

(x) To the extent that the competition for advertising revenues has a greater relative impact on those network affiliates that are already marginal, there may be increased pressure on the existing network structure.

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1 BBDO Media Resources and Information Group, Analysis of Network Erosion.

I INTRODUCTION

i) Present Status of the Private Television Broadcasting Industry

As the historical analysis of Part 1 of this study indicates, the private television broadcasting industry is well-positioned to deal with the new competitive environment. Net sales of television advertising in 1983-1984 are estimated at $830 million for private Canadian stations. This figure is based upon a decade of sustained average annual growth in excess of 16% and represent an outstanding sectoral performance.

Conventional broadcasters have already absorbed the greatest impacts of competition, as a result of the importation of distant Canadian and U.S. signals via cable and the licensing of new Canadian stations which took place during the 1970s. Despite the audience fragmentation caused by the introduction of these additional services, broadcasters responded by raising their advertising rates to successfully compensate for the increased competition. These findings demonstrate the financial stability of the industry and suggest that there may be room for growth in advertising markets. Evidence suggests that markets that are already heavily fragmented experience much less fragmentation when additional signals are introduced.[1]

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1 Burns Fry 1983.

The financial strength of the conventional broadcasters sharply contrasts with the instability of new entrants in the market for additional services. Furthermore, experience both in Canada and the U.S. indicates that the period needed by new entertainment services to achieve financial stability is longer than originally expected. After surviving their first few years, new services require a longer period than anticipated to attain profitability. This period provides conventional broadcasters with a "window" in which to adjust their programming and marketing strategies to cope with new competition. In addition, private broadcasters are well-positioned to enter new markets themselves.

Conventional broadcasters are also in the best position to maintain or increase their viewing hours, since they are well established in their markets. They offer programming which is extensively tested to satisfy mass audiences, and they have created strong viewing habits over the last twenty years. In addition, private broadcasting will continue, for the foreseeable future, to be the most efficient means by which viewers can access television entertainment, since it is delivered at no direct cost, and with no new hardware requirements. It will also likely therefore remain an effective medium for national advertisers to reach large audiences.

ii) Viewing Trends

Historical data show that increases in the number of stations available does not necessarily translate into an increase in the amount of time viewers spend watching television. Our examination of eleven Canadian markets, in Part 1 of this paper, shows that the highest increase in per capita weekly viewing hours from 1972 to 1982 was only 15%. Of the eleven markets examined, five were characterized by a decrease in per capita prime time weekly viewing hours over the past ten years. U.S. data, however, indicate that viewing hours have increased following the arrival of new choices; this may reflect the more diverse set of services available there.

Other research also reveals that viewers do not use all the channels and services available to them. A research company in Cambridge, Mass., for example, found that although "cable subscribers watched two or more channels than non-subscribers, ... this increase falls short of the total number of channels available to them."[1] Estimates of the impact of future services must, therefore, consider two constraining factors: (1) even if new choices lead to a slight increase in overall viewing, there is a limit to the number of hours people are able to, or choose to, view television; (2) viewers do not utilize all the viewing options available to them.

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1 New York Times, November 24, 1983.

II. Overview of Distribution Technologies

The following discussion is intended to analyse the range of alternative distribution technologies in terms of their impact on conventional services. It does not provide an exhaustive evaluation of future applications or their widespread impact; nor does it address in detail the specific services which may be offered through alternative technologies, as new services will be analysed in detail in Section III of the paper.

(i) Cable

Cable technology originally developed as a means to re-distribute broadcast signals in order to improve signal quality and offer a greater selection of services through the importation of distant U.S. and Canadian signals. It also has the capacity to act as a carrier, in the delivery of services such as 2-way surveillance, videotex, teletext, teleshopping and telebanking.

Throughout the 1970s, cable was perceived as a threat to local broadcasting, as it introduced competition in the form of distant signals into local markets, thereby fragmenting audiences. Regulations designed to afford broadcasters some protection were applied to cable; specifically carriage priorities, simultaneous program substitution, and no cable advertising.

(ii) Satellite Master Antenna Television (SMATV)

SMATV has evolved from master antenna television systems delivering off-air signals to multiple-unit dwellings (which have been exempted from the requirements of holding a broadcasting licence), and now deliver U.S. satellite programming, not authorized for cable carriage, directly to viewers in apartment and condominium complexes, hotels and taverns. As a result, many buildings which had offered cable service are switching to SMATV service, thereby bypassing the Canadian broadcasting system.

The proliferation of SMATV systems affects local broadcasters to the extent that local services may not be made available to SMATV viewers. In cases where they are still available, their competitive position may be reduced insofar as SMATV systems are not subject to regulations which favour local broadcasters.

The CRTC has been unable to effectively regulate SMATV systems. In November 1983, the CRTC published a modified MATV exemption policy which continued the exemption in cases where the satellite services carried were authorized for local distribution by cable. However, at the same time, a Federal Court decision placed the federal government's jurisdiction over SMATV systems in question.

The future of SMATV in Canada depends on a number of factors, including decisions regarding CRTC jurisdiction over the systems, and CRTC cable policy and its impact on the competitiveness of cable.

(iii) Direct Broadcast Satellite (DBS)

DBS refers to the generation of high powered satellites, the signals of which may be received by relatively small and inexpensive receiving equipment. A true DBS system is not yet in operation. In the U.S., plans are being made for the launching of DBS within a few years. In Canada, the federal government has not yet determined whether a true DBS system will be developed for the Canadian market.

DBS can be used for delivery of programming directly to the individual viewer, due to the small size of the receiving dish. It can also be used for program delivery to cable head-ends or other terrestrial distribution systems. As such, it represents an alternative distribution mechanism for both existing programming as well as new potential services.

An "interim" DBS system is now in operation in Canada, through the use of the Anik C Satellites. Northstar Home Theatre is offering viewers in uncabled areas both the receiving equipment and the pay television subscription.

Due to the coverage pattern of high-power U.S. DBS satellites, true U.S. DBS services will spill over into most of the Canadian market, and therefore may attract viewers to bypass the regulated Canadian system. As in the case of SMATV, the impact of U.S. DBS and its bypass potential, will depend on the Commission's cable policy as well as various programming and market variables, such as program quality, costs to subscribers and hardware costs.

(iv) Multipoint Distribution Service (MDS)

MDS is a common carrier service which uses omnidirectional microwave signals of the 2.5 GHz frequencies to deliver video, data, text and other material to subscribers from a central location (point) to a number of local locations (multipoint). MDS transmits an "unscrambled" signal which is received by a small receiving dish, installed within line-of-sight of the transmission. The signal is then transformed into a standard VHS frequency by a special "down" converter. MDS stations have a relatively small coverage area (signals are broadcast to a radius of 15 to 25 miles) and are constrained to providing service to receiving dish antennae.

In the U.S., MDS operations made up the second largest over-the-air pay TV service in 1982 and are operational in approximately 2% of the country, with an estimated 810,000 subscribers.[1] Some MDS operators offer a full 24-hour entertainment pay TV schedule; other operators lease daytime hours to companies providing business and data services.

In Canada, MDS frequencies, which contain 23 channels, have been reserved for instructional television. If schools are concentrated in a certain area, MDS can use directional antenna and broadcast only in that direction. Canadian educational institutions, however, have not

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1 American Telecommunications Market, 1982.

made extensive use of these frequencies, so new uses are now being considered for them, such as direct-to-home broadcasting, involving a higher power broadcasting antenna so that the home receiving dish could be smaller and less expensive than the dishes used by schools. Direct-to-home MDS could act as either a competitor to or a substitute for cable in areas where cable is not being used. MDS could retransmit signals from conventional television stations, U.S. stations, specialty services and pay TV. MDS is less expensive than cable to operate but it is more expensive to subscribers: in addition to a higher monthly fee, subscribers would have to buy a receiving dish and a "down" converter.

It would likely be used in remote and underserved areas or small communities around urban centres to receive television services not otherwise available. As such, it could enhance local broadcaster's coverage or introduce competition in those markets with limited services available.

(v) Low Power Television (LPTV)

Low power transmitters, known in the U.S. as "translators" and in Canada as "transmitters", have been used for many years. Their main use has been to extend full-power television signals to areas beyond that of normal coverage, or to areas where signal reception is interrupted because of mountainous terrain or tall buildings. LPTV uses very weak signals to broadcast over a small area (2 to 7 miles) without interfering with other signals.

In Canada, LPTV stations are currently used to rebroadcast the Cancom network signals, and by CBC and CTV, either on an owned or affiliate basis, to extend their coverage area. In addition, stations may be licensed as "LPTV stations", and used by a community to rebroadcast some network programming and locally-originated programs. In all cases, LPTV stations in Canada must not interfere with commercial stations and are mainly found in remote and underserved areas.

In the U.S., recent F.C.C. regulations permit LPTV stations to become mini-TV stations, originating their own programming and able to carry advertising or charge subscription fees. The FCC has received approximately 35,000 applications for LPTV licences; 400 new stations have been authorized and 200 are currently on-air.

In the Canadian context, in cabled areas, potential program providers have the alternative of using a cable channel for local distribution. Indeed, the high penetration of cable will likely reduce the widespread expansion of LPTV as a distribution medium. It would likely be a more attractive alternative in underserved areas to allow the entry of new services.

(vi) Subscription Television (STV)

Subscription TV refers to the transmission of a single channel of scrambled programming over-the-air, usually from a full power UHF or VHF television station to viewers. Signals are unscrambled via a special antenna installed on the subscribing household's rooftop, with cables running to a decoder box and then to the television set. Subscribers pay an installation fee for the decoding box and a monthly fee which includes programming charges and lease of the decoder.

In the United States, STV stations have been operational since 1977, offering current movies, entertainment specials and sporting events, for a fee similar to that for pay cable. In 1982, STV stations had 1.4 million U.S. subscribers. By fall 1983, however, STV subscribe. base had decreased to 986,000[1] and 8 STV stations had ceased operation. The STV industry points to cable penetration and high operating expenses as the key factors causing the decline of the industry. Indeed, it is unlikely that STV in the U.S. will be commercially viable in the long term.

In Canada, STV is only found in remote and underserved areas, in which low-power television stations distributed the CANCOM network signals on a subscription basis. There are no STV services using the scrambled signals of full power UHF or VHF television stations. Indeed the possibility of full power STV systems being established in Canadian cabled areas is remote for, as the U.S. experience

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1 "Bloom is off STV rose", Broadcasting, September 5, 1983, pp.35-36.

indicates, it is not likely that STV stations could survive the competition of cable. As such, it will have no significant impact on local private broadcasters.

(vii) Videocassette Recorders (VCR)

VCRs have the capacity of recording and playing video programs of all kinds. The viewer may purchase or rent pre-recorded video cassettes, record tapes using a home video camera, or record programs broadcast on television. As such, it serves as an attractive alternative to cable TV and off-air TV with the availability of pre-recorded programming.

The cost of VCRs has decreased since their introduction into the market place, and is expected to continue to decrease, resulting in increased in sales. In addition, it is also forecast that video cassette tapes will also drop in price. Nordicity estimated that by the end of 1984, VCR penetration in Canada will be 22%. In the following years, however, growth is expected to taper off.

The 1983 BBM Spring Sweep Survey found that use of VCRs among owners of the technology is low: only 20% of those living in homes equipped with VCR use them in an average week. The survey also found that on the average VCRs are used for only about 4 hours a week.[1] Despite the high VCR penetration which is predicted, therefore, the infrequent use of the technology may minimize its impact on conventional broadcasting.

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1 "New Communications Technology and Services", Nordicity 1983.

Studies on VCR use have found that VCRs are used primarily for "time shifting", ie. recording conventional television programming to play back at a later time. The most frequently recorded program are movies, mini series and daytime serials. VCR users frequently edit out or "zap" commercials when taping a program: a U.S. survey has shown that well over half of all VCR owners frequently skip commercials when watching shows they have recorded.[1] This practice may disrupt conventional broadcasters' scheduling patterns or may reduce advertising revenues if the loss of audience to such commercials is accurately measured. There is evidence, however, that "zapping" tends to decline among VCR owners after the first year of ownership.[2]

To the extent that VCR use focuses primarily on recording and playing conventional programming (as opposed to playing pre-recorded tapes), it may not significantly affect viewing of conventional programming. Pay TV may be more seriously affected by VCRs, as consumers may choose to purchase a VCR instead of pay TV for the purpose of viewing alternative programming. VCRs may well reduce the number of multi-pay households.

(vii) Videodisc Players

The videodisc player is a playback machine that does not record. The advantages of the video disc player over the VCR include lower cost and the high capability for storage and playback.

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1 BBM, The New Media: Under the Microscope, 1983.

2 Benson & Bowles Inc., 1983.

A U.S. survey reports that less than 1% of all households own a videodisc player. Moreover, consumer interest in purchasing a player was found to be non-existent.

Due to its inability to record, its price and its limited software, videodisc players are not likely to achieve significant market penetration. As such, the amount of viewing time lost by conventional broadcasters to the use of videodisc players will probably be insignificant

(ix) Home Computers

Home computers are microprocessor-driven devices with memory which can perform thousands of calculations per second and which can be programmed to perform many separate tasks. The numerous applications of home computers include entertainment (e.g. videogames), education, work at home, and home management.

1983 should experience approximately 400,000 home computer sales in Canada, with $155 per hardware unit in software sales.[1]

In November 1983, Nabu Manufacturing Inc. introduced the world's first cable home computer system in Ottawa. The subscriber rents cable-delivered software, for a monthly fee, as an alternative to purchasing software cartridges or discs. The system transmits video games, educational software and household information over cable TV to a computer which the subscriber may rent or purchase.

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1 NORDICITY, 1983.

Home computer penetration is expected to increase dramatically in the near future. It is estimated that home computer sales will be 800,000 1985 and 2,400,000 thousand by 1990; software sales being $155 per hardware unit.[1]

Home computers will not likely be used as an alternative to conventional television watching. Therefore, they are not expected to affect the broadcasting industry.

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1 NORDICITY, 1983.

III ALTERNATIVE SERVICES

This section presents a description of future services which could alter the viewing of conventional television, a discussion of their present and future usage, and their expected impact on private local broadcasters.

a) Programming Services

(i) Pay TV

Description: Pay TV is different from conventional advertiser supported TV in that the viewer is required to pay for the programming. Subscribers pay an initial fee for the installation of equipment to decode the scrambled pay TV signals as well as monthly fees for the service. Revenue from subscribers is divided between pay-television licensees and cable companies. Pay TV offers relatively high-cost programming including feature films and big budget specials.

Usage: In February 1983, 6 Pay TV channels became operational; 3 at the national level and 5 at the regional level. Since that time two services, C-Channel and Star Channel, have ceased operation; the remaining operations required re-financing and expansion and; two additional regional services have been licensed. By late 1983, approximately 488,000 households subscribed to pay TV, representing 6% penetration of cabled homes.[1] Pay TV holds 1.1% of the market viewing share in Canada.[2]

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[1] Mediastats, 1983.

[2] BBM, 1983.

Future: Estimates predict Pay TV penetration in Canada from 11% to 25% for December 1985.[3]

Impact: Approximately 60% of Pay TV use is in off-prime periods, such as late at night.[4] As such, the impact of Pay TV on conventional stations and networks, which rely heavily on revenues generated during prime time hours, has been minimized. If Pay TV proves to be successful in Canada, it will undoubtedly have some impact on local private broadcasters' viewing shares. However, the loss of viewing share will not likely translate into financial harm for broadcasters since pay TV and conventional broadcasters do not compete for advertising sales. Furthermore, despite the high level of fragmentation which already exists in most broadcast markets, broadcasters have historically been able to raise rates for television advertising, thereby generating increased revenues.

(ii) Specialty Services

Description: Specialty services are narrowcast, specialized programming available to cable subscribers on a discretionary basis. Examples of specialty services include music video, all-news and all-sports channels, children's programming and ethnic programming channels.

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[3] Burns Fry, 1983.

[4] BBM, The New Media: Under the Microscope, 1983.

Usage: The CRTC recently granted licences to two Canadian specialty services — a music service and sports service — and developed a list of U.S. satellite services which may also be carried on cable, subject to tiering policy. The U.S. services will complement, not compete with new Canadian specialty programming. The Commission is still considering the introduction of other formats, including health, children's and multi-lingual.

Future: The U.S. experience has shown that, although many specialty channels are offered by cable on the "basic" service, there is evidence of considerable difficulty in establishing them. The number of specialized channels is decreasing; some services[1] are merging to appeal to a broader base of viewers. It seems that the "notion of numerous specialized channels is giving way to a system in which a limited number of channels are aimed at mass audiences..."[2] Small audiences, high programming costs and audience expectations of high quality product are making the operation of a specialized channel a risky business. Indeed, none of the more than 30 advertising-supported specialty services that are currently operational in the U.S. are profitable. Canada's smaller market, and the fact that discretionary carriage prevents large advertising reach, may make it difficult to establish Canadian specialty services that will be economically viable in the immediate term.

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1 Cable Health Network of Viacom International Inc. is merging with Daytime of Hearst/ABC Video to form Lifetime, a service providing talk shows focused on health, home and family.

2 [illegible]

Impact: In the event that a number of specialty services are successfully established in Canada, and available either nationally or in large urban markets, the conclusions of the historical analysis section would suggest that their impact on local broadcasters would be minimal. These services would be entering highly fragmented markets in which local broadcasters have already absorbed the impact of fragmentation. Specialty services could, in fact, strengthen the viewing share of Canadian broadcasters as a whole in relation to U.S. broadcasters. Broadcasters may also provide an important second "window" for the syndication of specialty programming.

A sports service and multilingual services most likely have the greatest impact on conventional broadcasters. Sports programming, characteristically, is high appeal programming: in 1983 in Vancouver, for example, a semi-final CFL game attracted a 67% audience share; Toronto Maple Leaf hockey games attract on the average a 28% share of viewing audiences. A multilingual service would also have a good chance to be successful due to the small amount of alternative multilingual programming offered on conventional TV and the relatively large potential audience, particularly in major urban areas.

TVOntario and Radio-Québec, which are somewhat similar to specialty services and are available off-air on UHF frequencies to the total population of their respective provinces, barely hold a 2.5% provincial viewing share each. A multilingual service such as CFMT,

broadcasting in the highly fragmented Toronto market, has only reached a 2% viewing share after four years in operation. The CBC French-language service which, outside Quebec, may be considered a language-oriented service, has an average 1% viewing share in the six provinces outside Quebec where it is available off-air.

In contrast, specialty services in Canada will be available primarily on cable's converter service. Converter penetration in Canada is approximately 25% of all households. The potential market for specialty services in the near future, therefore, is fairly limited, and consequently, the fragmentation of audiences to conventional broadcasters may be further reduced.

(iii) CANCOM Delivery of 3+1

Description: CANCOM is currently authorized to deliver the 3+1 U.S. services to its core market as well as those markets where the signals are otherwise unavailable or of poor technical quality. The signals primarily originate from Detroit.

Usage: As of March 1984, a total of 406 applications to carry CANCOM's U.S. package have been received by the Commission. No applications to replace U.S. services received via microwave with CANCOM's U.S. package have as yet been approved.

Regulatory policies currently limit the carriage of CANCOM's U.S. package due to perceived threats to conventional broadcasters. It has been argued that national advertisers could purchase time on the Detroit station in order to cover the Canadian market, thereby upsetting the revenue base of Canadian broadcasters.

Future: Satellite technology could replace the existing means of delivering the U.S. networks to most Canadian viewers. It offers a signal superior in quality to the microwave transmission. To some extent, the degree to which satellite becomes an attractive alternative will depend on its cost relative to microwave; it may be estimated that satellite would be a less expensive transmission medium than microwave. At the same time, the time zone differences involved in distributing Detroit stations nation-wide may somewhat diminish the demand for the CANCOM package.

Impact: The demand for, or substitutability of, the CANCOM package will likely be minimized by two factors: the time zone difference and the fact that some of the major urban markets will continue to be served by off-air U.S. border stations. However, even in the event that CANCOM's U.S. package is more widely available, it may not have any greater impact on the revenues to Canadian broadcasters than the U.S. network signals that were imported into most Canadian markets via cable during the 1970s. That is, Canadian broadcasters have already experienced the audience fragmentation caused by the availability of popular U.S. services, with no undue effect on national advertising sales. Advertisers require the coverage achieved by the local broadcasters and continued to purchase the Canadian market, despite the extended reach of U.S. border stations.

(iv) Superstations

Description: A superstation refers to a local station which is made available either nationally or regionally through the use of satellite. Superstations are typically independents (i.e. with no network affiliation) that maintain their locally-oriented program schedule.

a) U.S. Experience

Usage: There are currently three superstations operating in the U.S., originating from Atlanta, Chicago, and New York respectively. As independent local stations, their program schedules consist of movies, sports programs and syndicated re-runs. Prime-time viewing tends to take place in the 4 p.m. to 7 p.m. time period, although this trend is changing somewhat. WTBS (Atlanta) is the most successful superstation of the three. However, in December 1983, all three superstations captured only a 3% share in prime-time; a 4% share in cable homes only.[1]

Future: The three U.S. superstations may be among those services considered by the Commission for distributing on discretionary tiers on Canadian cable systems.

Impact: The low, albeit growing share of superstation viewing in the U.S. suggests that in an environment characterized by a significant degree of choice, the popularity and impact on the conventional networks of the superstations are limited. Indeed, the unauthorized reception in Canada of U.S. superstations may be a function of lack of choice.

Should the Commission approve the reception of U.S. superstations in Canada, it will not likely affect the revenue base of private broadcasters, which still provide advertisers with large audiences through the scheduling of mass-appeal programming. In this regard, the impact will be further minimized by the fact that prime-time viewing of U.S.

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[1] Paul Kapan, "Cable TV Advertising", February 22, 1984.

superstations does not totally coincide with that of the conventional networks. In addition, to the extent that the superstations schedule different programming, their introduction into the Canadian market would not affect the costs of popular programming purchased by private broadcasters.

b) Canadian Experience

Usage: There are currently no Canadian superstations in operation. U.S. superstations are, however, received on an unauthorized basis and are very popular with viewers in underserved regions of Canada. The high viewing levels in underserved areas likely reflect the poor choice available to viewers and maybe reduced as more Canadian alternatives become available.

Future: The CRTC recently called for comments on the introduction of distant signals, delivered via satellite, microwave or off-air, and will likely be considering authorization of the superstation formats. Non-affiliated stations contained in the CANCOM package and various off-air independents are among the potential superstation operators in Canada.

Impact: If Canadian superstations develop according to the U.S. model, they may not have a substantial impact on Canadian private broadcasters. That is, they would not compete for audiences in the traditional prime-time period, nor would they affect conventional broadcasters' position in purchasing foreign programming.

With more directly competitive program schedules, Canadian superstations may adversely affect the viewing shares of local broadcasters and the costs of some foreign programming. However, importation of distant Canadian signals has not historically harmed the financial position of the local private television stations, since broadcasters were able to effectively increase their advertising rates to compensate for the new competition and audience fragmentation. As the historical analysis of part 1 suggests, broadcasters have been able to maintain strong financial performances, despite the introduction of competitive alternatives.

The introduction of Canadian superstations would also likely increase overall viewing share of Canadian stations, at the expense of the U.S. stations in the local market.

Competition from Canadian superstations would likely be felt most strongly by those already marginal broadcasters. The network may be willing to absorb the marginal affiliate in order to obtain the coverage provided in the local market. However, to the extent that new technologies provide alternative means of distributing network programming, these may be incentives for the network to discontinue support of the marginal affiliate.

(v) Pay-per View (PPV)

Description: Pay-per-view is a subscription TV service which permits subscribers to select which programs they wish to receive, and pay on a per program basis. PPV is delivered through addressable decoders which can unscramble signals from the transmitting station or cable headend, and allows for the delivery of special programs, including rock concerts, educational courses, and major sports events such as prize fights. Pay-per-view may be delivered by national, regional, or local operators.

Usage: It is estimated that 70% of the STV systems in the United States use addressable decoder boxes, allowing for PPV. At the present time pay-per-view services have not been licensed in Canada.

Future: According to CCTA, 46 Canadian cable systems, serving 41% of subscribers, provide addressable decoders which could now be easily used to supply pay-per-view programming.

Impact: The primary impact of pay-per-view on local private broadcasters would be seen in the stations' shares in those time periods when special-event, high appeal programming is scheduled. Special events can attract considerable audience: for example, in 1983 in Toronto the Miss Canada Pageant attracted a 31% share of viewing, a CFL semi-final game claimed a 36% share and the Santa Claus Parade attracted 56% of the viewing when broadcast.[1] Although pay-per-view could take away considerable from conventional broadcasters' shares at particular times, the number of high appeal special programs, for which subscribers will pay, is extremely limited relative to the total broadcast schedule. More importantly, no advertising is sold by pay-per-view operators. Therefore, the specialized programming offered by pay-per-view would have a minimal overall impact on the conventional broadcasters' revenues.

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[1] BBM data.

b) Non-Programming Services

(i) Video Games

Description: Today's video games have come a long way since their introduction, both in terms of quality and cost. Programmable machines allow the user to choose from a variety of games with realistic representations of ships, players, etc., as well as a great control over strategy. Educational cartridges are also offered by manufacturers.

Usage: Approximately 17% of all U.S. households own a video game system. In Canada, the penetration rate is estimated to be 9.5%. The NABU Network has recently introduced video games, with other computer software, to certain cable systems. In the U.S., Intelligent Television is an all-game channel that offers subscribers 24 hours, 7 day a week access to a choice of 15 different video games for a fraction of their retail price in stores.

Future: Most observers predict that video games will increase in popularity in the 1980s, but at a slower rate than the explosive growth of recent years.

Impact: Videogames as entertainment are more similar to traditional "social" games than to conventional television watching. Videogame playing, therefore, is not expected to significantly reduce the amount of time spent watching television entertainment, particularly in view of increasing number of households with more than one television set. Hence, increased use of videogames should not significantly affect local broadcasters.

(ii) Teletext and Videotex

Description: Teletext is a one-way system of transmitting information to viewers using a broadcast signal or cable. Typical teletext services include weather information, sports results, news, and community notices. The term "videotex" refers to two-way interactive systems which transmit information either via cable or telephone line. In the future, videotex may also be transmitted via fibre optics, microwave links or direct broadcast satellite. Videotex can offer a variety of two-way services such as in-home shopping, banking, ticketing, medical alert, fire and security systems, and electronic messaging.

Usage: Teletext and videotex services are currently available on a very limited experimental basis. In Canada, under 500 households have teletext services available. Approximately 80,000 U.S. households have access to teletext services.

Future: It is estimated in North America there will be 95,000 teletext terminals in 1985, 690,000 in 1987 and 4,460,000 in 1990. With respect to videotex terminals, estimates predict 185,000 in 1985, 1,310,000 in 1987 and 8,700,000 in 1990.[1]

In Canada, due to the limited capacity for videotex delivery via the existing telephone network, and the underdevelopment of two-way cable systems, meaningful introduction of videotex by cable will not likely take place before the late 1980s.

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[1] Nordicity, 1983.

Impact: At the present time, cable offers a news/weather/information service not unlike a teletext service. Although this service has been in place for several years, IBM has reported no significant viewing time of the service. Since teletext and videotex are primarily information-oriented services and not entertainment media, they are not likely to take away from leisure time, and television watching. They may, however, replace time otherwise allocated by viewers to reading newspapers, magazines, going to the bank, going shopping, etc. Consequently, teletext and videotex will not have any significant effect on local broadcasters in the future.

IV Conclusions

The following conclusions may be drawn from the discussion of alternative technologies and services:

(i) The future environment will be characterized by a variety of alternative distribution technologies, some of which will lie outside the control of the regulator. Some of these alternatives such as SMATV will pose a significant threat to the future of cable. As such, they will reduce the effectiveness of those cable regulations which are intended to protect local broadcasters i.e. carriage priorities, simultaneous program substitution.

(ii) Alternative technologies will make possible the entry of new service providers, regardless of the direction of regulatory policies. Indeed, regulatory policies should recognize the inevitability of such entry and adjust accordingly.

(iii) Specific technologies, such as DBS, may be utilized by existing broadcasters to achieve more effective and/or less costly means of network coverage.

(iv) Similarly, other distribution technologies, including MDS and LPTV, may improve local coverage.

(v) To the extent that SMATV and DBS systems may not distribute local Canadian services, this technology may adversely affect local coverage.

(vi) The availability of new services in local markets will fragment audiences to local broadcasters. This audience fragmentation will be minimized by the fact that viewers do not watch all the channels available to them.

(vii) To the extent that pay television, pay-per-view and specialty services will be of limited appeal and will not compete for advertising revenues, they will not have an adverse effect on the financial position of broadcasters. Indeed, these services may offer an additional source of programming for private television, as these service providers seek to syndicate their in-house programming to additional markets.

(viii) Despite competition from more widely-available, advertiser-supported formats, such as super tations, private broadcasters will continue to achieve the coverage needed by advertisers. Similarly, the delivery of the 3+1 U.S. services via CANCOM will not likely diminish Canadian broadcasters' ability to attract advertising revenues, as advertisers seek the widespread coverage of local stations. Indeed, Canadian broadcasters have already faced the competitive impact of the U.S. services in their markets.

(ix) Increased competition and accompanying audience fragmentation will not significantly affect broadcasters' financial position. Indeed, U.S. sources estimate that although erosion of network audiences may reduce the prime-time network viewing share to 65% by 1990,[1] it will not significantly reduce the attractiveness of network television for advertisers.

(x) To the extent that the competition for advertising revenues has a greater relative impact on those network affiliates that are already marginal, there may be increased pressure on the existing network structure.

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1 BBDO Media Resources and Information Group, Analysis of Network Erosion.